

## CLAIMS

1. Plant protein with repeated WD40 motifs, characterized in that it belongs to the FZR subfamily.
- 5 2. Protein according to Claim 1, characterized in that it exhibits at least 45%, and preferably at least 55%, identity with the polypeptide having the sequence SEQ ID No. 2 or at least 60% and preferably at least 70% similarity with the polypeptide having the sequence 10 SEQ ID No. 2.
- 15 3. Purified nucleic acid fragment, characterized in that it comprises all or part of a sequence encoding a protein according to Claim 1, or its complementary sequence.
5. Cell transformed with at least one nucleic acid fragment according to Claim 3.
- 20 6. Cell transformed according to Claim 5, characterized in that it is a plant cell.
7. Transgenic plant transformed with at least one nucleic acid fragment according to Claim 3.
- 25 8. Use of a protein according to <sup>Claim 1</sup> either of Claims 1 and 2, or of a nucleic acid sequence according to Claim 3, for regulating the differentiation and the proliferation of plant cells.
9. Use according to Claim 8, characterized in that the said protein or the said nucleic acid sequence is used to promote endopolyploidy in the cells of a plant or 30 of a plant tissue.
10. Use according to Claim 8, characterized in that the said protein or the said nucleic acid sequence is used to promote the *in vitro* regeneration of plants from calli in culture.
- 35 11. Use of a protein of the FZR subfamily or of a nucleic acid sequence encoding all or part of the said protein, or its complementary sequence, for regulating the differentiation and the proliferation of plant cells.

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